

SURGICAL PATHOLOGY AND THERAPEUTICS, AND OPERATIVE SURGERY.

21. Dislocation of the Ulna forwards at the Elbow, without fracture of the Olecranon Process.—EDWIN CANTON, Esq., relates (*Dublin Quarterly Journal of Med. Sci.*, Aug. 1860,) the following case of this extremely rare accident which occurred under his care in the Charing Cross Hospital. F. P., aged 40, a somewhat short, slim-built, but muscular man, while driving in a light cart at the rate of seven or eight miles an hour, was thrown out, and instinctively extended his right hand to prevent injury to his head. The weight of his body, however, caused sudden and forcible flexion of the elbow, and at the same time the forearm became twisted in under the chest. On rising, it was found that the elbow was considerably swollen, and the power of moving it entirely lost. When admitted into hospital, the forearm was forcibly flexed, and the hand supinated. The swelling, ecchymosis, and tension around the elbow were so great that it was with difficulty any of the more salient anatomical peculiarities of this part could be recognized—everything appeared, in every way, so disarranged. The skin covering the inner condyle was stretched to the utmost, and here, over a space about the size of a sixpence, it was to such a degree injured, that a compound state seemed to be momentarily threatened. The antero-posterior and lateral diameters of the joint were increased in extent, and the general swelling was so great as to present a circumference far beyond the normal size of this region. Externally and somewhat anteriorly the cuplike cavity of the radius could be indistinctly distinguished; internally, the condyle was unduly prominent; anteriorly no particular point for diagnosis could be determined on, on account of the state of forcible flexion and great tumefaction there; posteriorly, also, the swelling was very considerable, but, below it, there existed a depression favouring the view that the ulna was broken immediately below its olecranon process. No median gutter, with lateral elevations to bound it, could be felt.

Attempts were made to rectify the mal-adjustment, but without success; the efforts, however, could not be longer continued, for, it was obvious that the injury already sustained by the soft parts was so extensive—the obstacles to be overcome so resistent, and the great likelihood incurred of rendering the case one of the compound kind, forbade further trial, and it was agreed, in consultation, to place the limb at rest on a splint, and to keep the parts cool with an arnica lotion. Within the course, however, of forty-eight hours the tumefaction became still greater; a large slough was forming on the inner side of the joint, and high constitutional irritation having set in, I was obliged to amputate the limb at a sufficient distance above the articulation.

Dissection.—A very careful examination of the elbow was made, under my superintendence, by my pupil, Mr. Edgar Browne, with the following results:—

Bones.—The ulna was dislocated forwards, so that the upper surface of its olecranon process became placed in front of the capitellum humeri, and had thus assumed the position naturally occupied by the head of the radius during flexion of the forearm. The radius was supinated and maintained *in situ naturale*—as regards the ulna—by the coronary and interosseous ligaments being intact.

Ligaments.—Of the anterior ligament, the only part remaining at all perfect was a shreddy portion about the centre; all the rest of it had been torn through. The posterior, and both lateral ligaments were completely divided. The coronary and oblique ligaments were uninjured.

Muscles.—The triceps extensor was detached from all its points of insertion. The supinator radii longus was uninterfered with at its origin; but the two radial extensors of the carpus beneath it were torn away from the surfaces whence they spring. All the muscles which arise from the external condyle—with the exception of the supinator radii brevis, and anconæus—were detached from this process. The only muscle that was torn through at its origin from the internal condyle was the flexor carpi ulnaris—the olecranon and ulnar portions of it, however, continued intact. No mischief whatever had happened to any other

of the pronators and flexors. The biceps and brachialis anticus were put greatly on the stretch.

Bloodvessels.—Though much shifting of their position had necessarily taken place, no vessel of large size had been injured; the sacrifice, however, of smaller ones must have been great—judging from the large amount of blood with which all the soft textures were infiltrated.

Nerves.—The ulnar nerve was torn across where it passes behind the inner condyle. The sheath of the median was distended, and its substance permeated with blood. The other nerves uninjured.

22. *Treatment of Fractures in the Royal Infirmary.*—JAMES SPENCE, Esq., Lecturer on Clinical Surgery, gives the following account of the treatment he adopts, in the Royal Infirmary, Edinburgh, in cases of fracture:—

"In cases of fracture of the shaft of the femur, I employ the long splint, together with two short splints, fixed with slip knots on each side of the broken bone, to prevent any lateral displacement. In fractures of the neck of the femur, the long splint, without the lateral support, is used; but in many cases of old infirm persons, in whom the use of the splint cannot be continued, I have recourse to the following plan: A long narrow pillow or pad is placed between the legs, extending from above the knee to below the ankle, and the injured limb is secured to the sound one, by bandages at the knees and ankles, a broad flannel spica bandage being applied round the pelvis, and over the upper part of the injured thigh, so as to fix the thigh and pelvis. I prefer this plan to the double incline of pillows, as it not only insures greater fixity and extension, but also enables us to place the patient occasionally on the sound side, and so diminish the risk of bed-sores forming on the back. In cases where, from extensive bruising of the body or limb on the injured side, or other causes preventing the use of the splint, and where, at the same time, full extension is desirable, I apply the long splint on the sound limb, and then keep the injured limb fully extended, by fastening it to the sound one thus fixed.

"In cases of simple fracture of the bones of the leg, I find the simplest and most satisfactory plan is the use of two lateral pasteboard splints with foot-pieces, moulded to the limb, secured by slip knots, the limb being laid on the outer side, and flexed to a greater or less degree, according to the nature of the fracture. In cases of very oblique comminuted or compound fractures, or in cases of fracture of the tibia very high up, the use of Liston's splint, properly padded and adjusted, is the treatment I resort to. In fractures near the malleoli, attended with splitting of the lower part of the tibia, or separation of that bone from the fibula, in which the heel and foot are retracted, and the bones of the leg projected, and where the tendency to retraction, recurring after coaptation, is considerable, the stirrup splint well padded and placed on the front of the leg (used either alone or combined with narrow lateral splints), affords a fixed point to which we can bring forward the heel by bandaging, whilst, at the same time, it presses upon the bones of the leg, and prevents them projecting forwards. In cases of Pott's fracture of the fibula above the malleolus, attended with eversion and twisting of the foot, Dupuytren's splint, applied along the tibial side of the leg, is used as a fulcrum over which the foot is kept inverted, whilst, at the same time, slight extension is preserved. For some cases attended with retraction of the foot as well as eversion, the stirrup splint may be used with advantage, the inner horn of the stirrup being made the fulcrum over which the foot is kept inverted, whilst retraction is obviated by bandaging the heel forwards to the splint. Of course, in the corresponding fracture of the malleolar part of the tibia, with inversion, the Dupuytren splint is applied on the fibular side, to keep the foot everted. With exceptional instances, I have always employed these simple methods, so long and successfully used in this hospital; and after very extensive experience in treating fractures in Hospital, Dispensary, and private practice, I see no reason for changing to other methods, which certainly could not afford me better results, and which seem to me attended with some risk, from which these ordinary plans are free. I allude, particularly, to the use of the starch bandage, and the plaster of Paris methods of treatment, which are now much used on the Continent. In regard to the starch bandage